

1. Applications

- Lan equipment
- Video
- DVI
- High Speed Data Line
- Ethernet
- USB 2.0 Power and Data line Protection
- Smart Phone

2. Feature List

- Max Operating Voltage V_{RWM} :3.3V
- ESD Protection:Level 4
- Low Clamping Voltage
- 48 Watts Peak Pulse Power Per Line ($t_p=8/20\mu s$)
- Ultra Low Capacitance:5pf typ.
- Protection one Line I/O port

3. IEC Compatibility

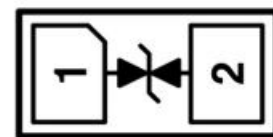
- EN61000-4
- 61000-4-2(ESD):Level 4,Contact: $\pm 8KV$,Air: $\pm 15KV$
- 61000-4-4(EFT):40A-5/50ns
- 61000-4-5(Surge):4A-8/20us

4. Mechanical Characteristics

- Molded JEDEC DFN-0603 Package
- Packing: Tape and Reel
- Flammability Rating UL 94V-0
- Halogen Free
- JEDEC MSL Classification :Level 1



DFN-0603



5. Device Characteristics

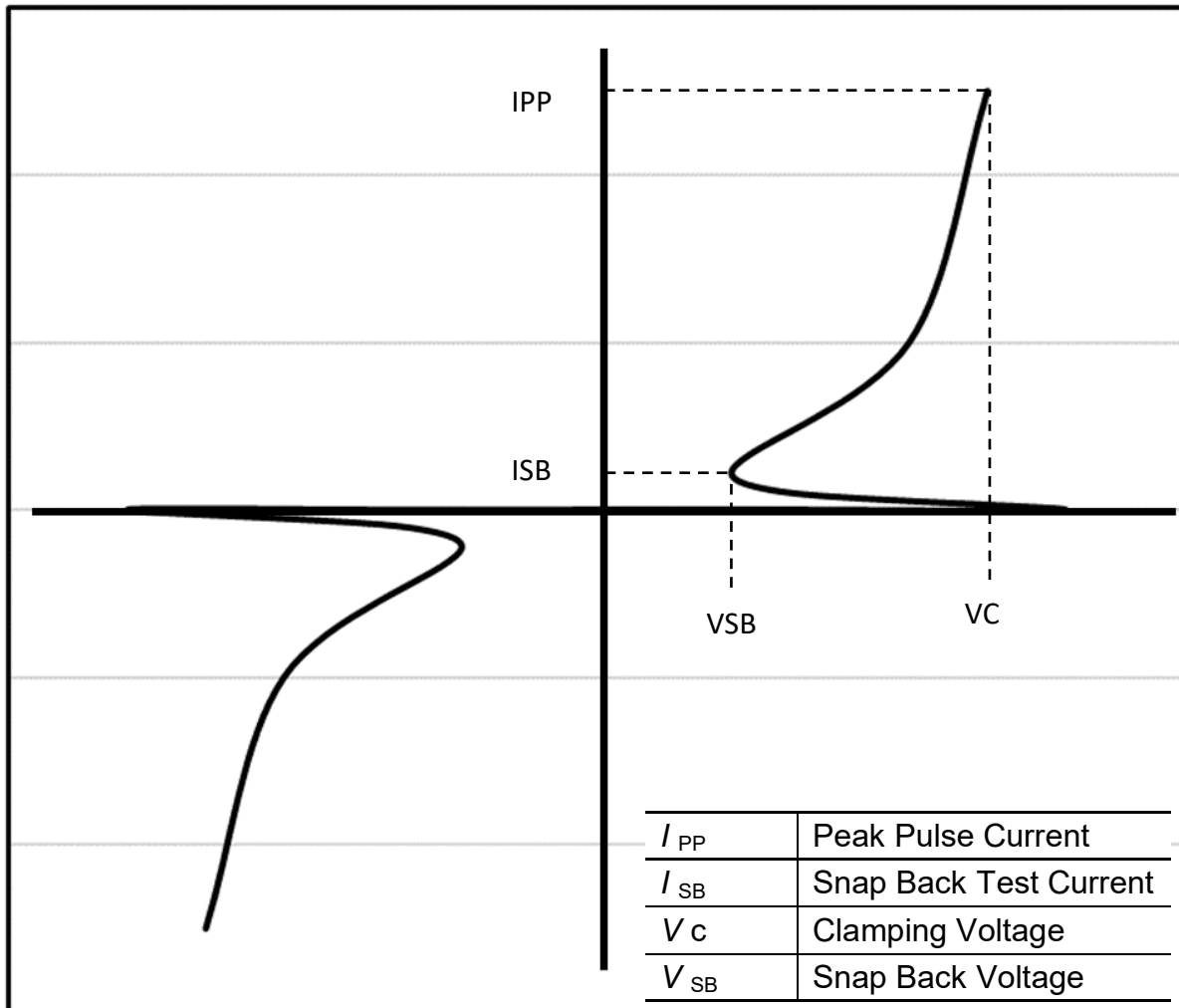
Maximum Ratings@25°C Unless Otherwise Specified

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	48	Watts
Operating Temperature	T_J	-55 ~150	°C
Storage Temperature	T_{STG}		

6. Electrical Characteristics

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Reverse Stand-off Voltage	V_{RWM}	Pin 2 to 1/Pin 1 to 2	-	-	3.3	V
Holding Voltage	V_H	$I_{SB} = 50mA$, Pin to Pin	2.8	-	-	
Trigger Voltage	V_{TH}	$I_{PT} = 2\mu A$, Pin to Pin	3.5	-	-	
Clamping Voltage	V_C	$I_{PP} = 1A$ $t_p = 8/20\mu s$	-	-	9.0	
		$I_{PP} = 4A$ $t_p = 8/20\mu s$	-	-	12.0	
Reverse Leakage Current	I_R	@ V_{RWM}	-	-	0.5	μA
Peak Pulse Current	I_{PP}	$T_p = 8/20\mu s$	-	-	4	A
Junction Capacitance	$C_{I/O}$	Pin capacitance to GND. $V_{dc} = 0V, f = 1MHz$	-	5	7	pf

7. Electrical Characteristics $T_A=(25^{\circ}\text{C})$



8. Rating and Characteristic Curve

Fig. 1 Non-Repetitive Peak Pulse Power v_s Pulse Time

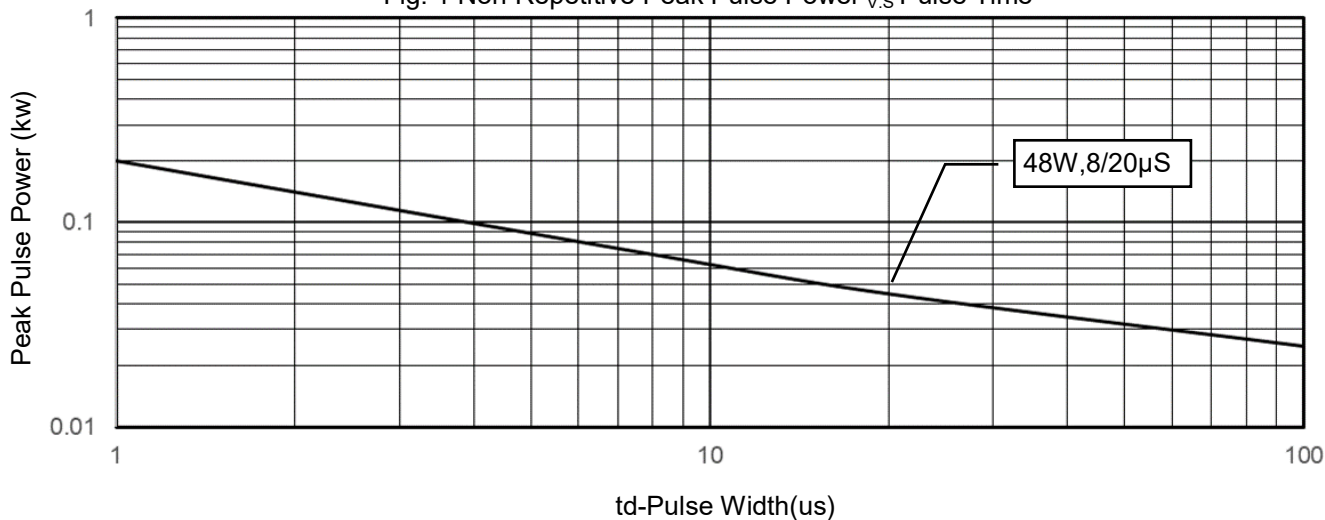


Fig. 2 V_C & I_{PP} Drawing

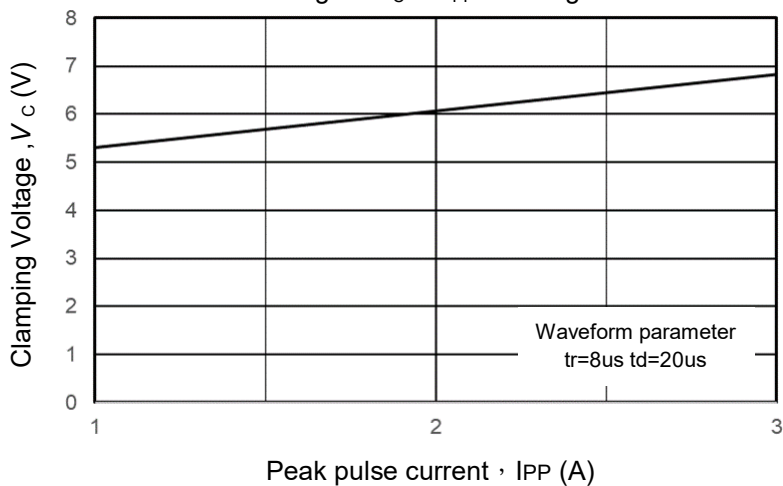


Fig. 3 Power Derating Curve

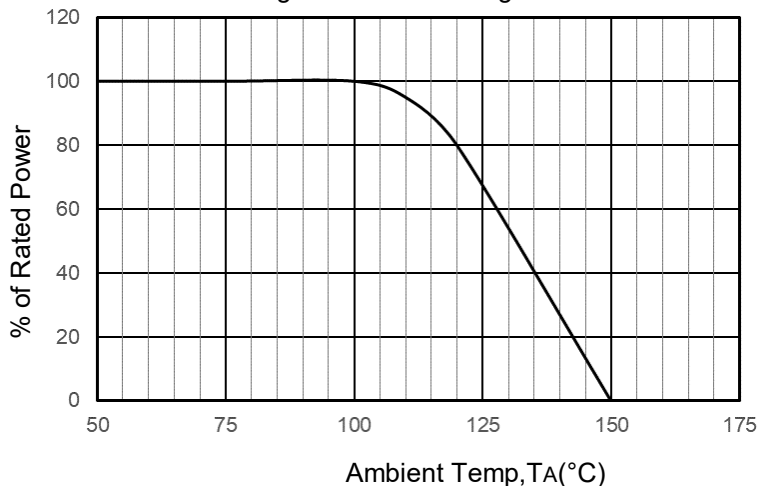


Fig. 4 Pulse Waveform

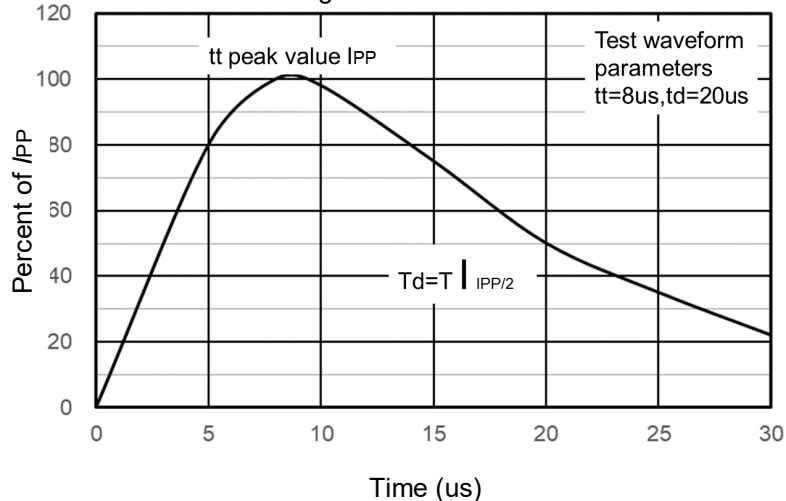
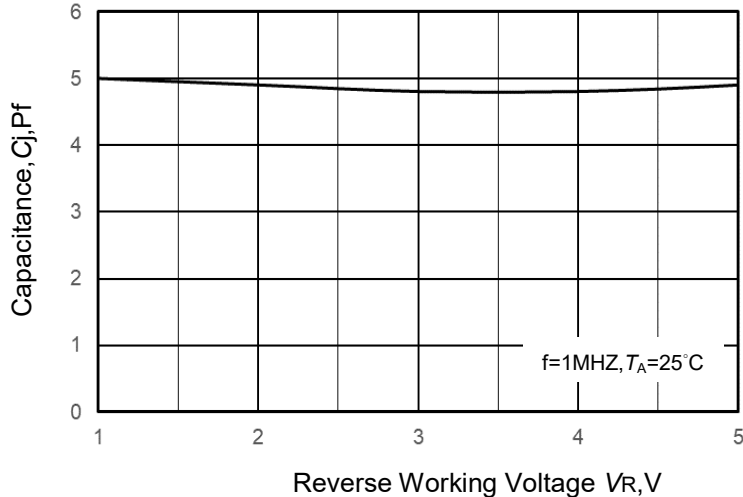
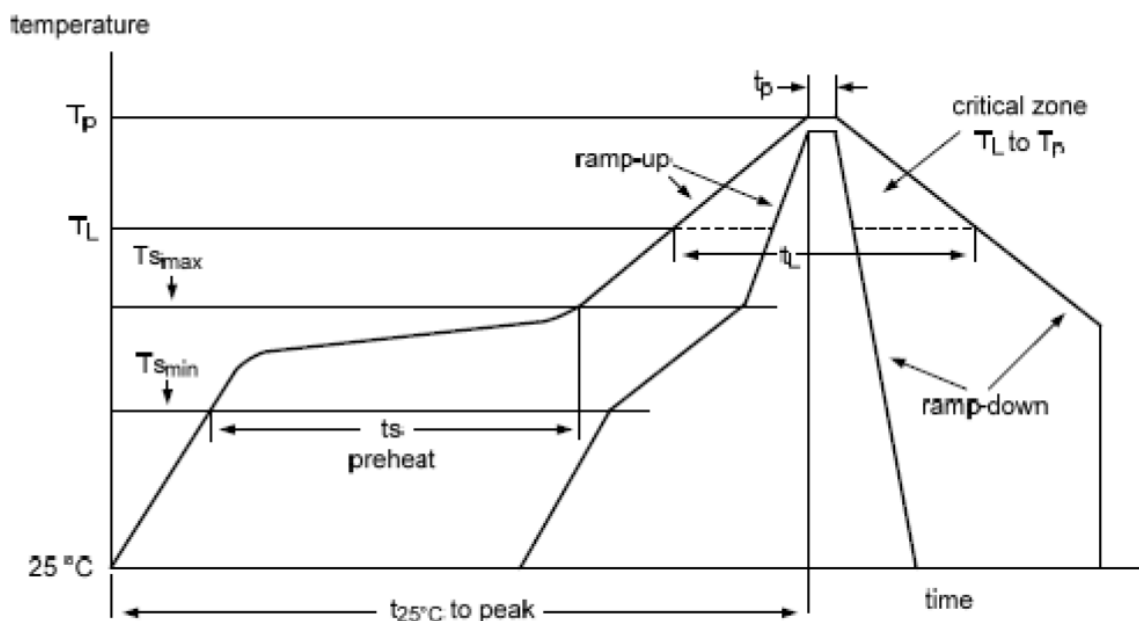


Fig. 5 Capacitance vs Reverse Voltage

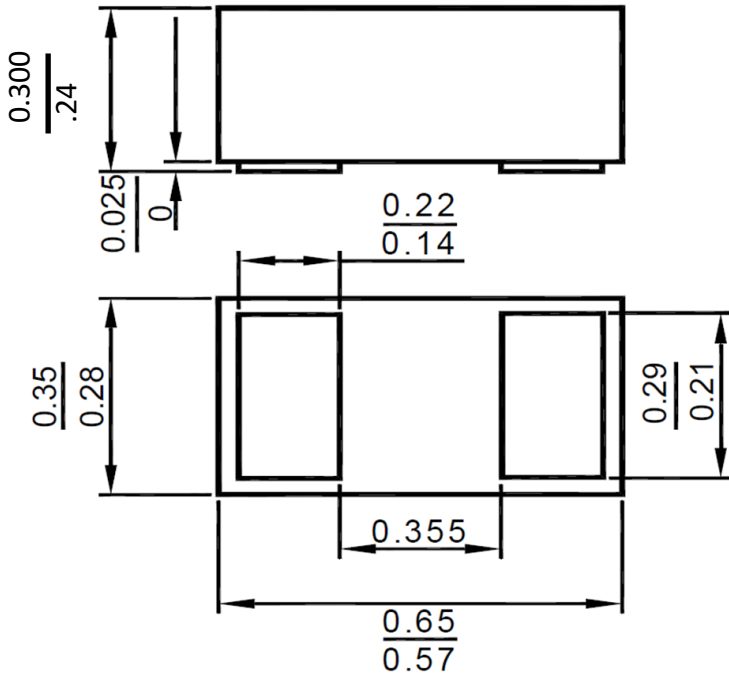


9. Soldering Parameters

Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate (T _{smax} to T _p)	3 °C/s maximum	3 °C/s maximum
Preheat		
Temperature minimum (T _{smin})	100 °C	150 °C
Temperature maximum (T _{smax})	150 °C	200 °C
Time (t _{smin} to t _{smax})	60 s to 120 s	60 s to 180 s
Time maintained above		
Temperature (T _L)	183 °C	217 °C
Time (t _L)	60 s to 150 s	60 s to 150 s
Peak/classification temperature (T)	235 °C	260 °C
Number of allowed reflow cycles	3	3
Time within 5 °C of actual peak temperature (t _p)	10 s to 30 s	20 s to 40 s
Ramp-down rate	6 °C/s maximum	6 °C/s maximum
Time 25 °C to peak temperature	6 minutes maximum	8 minutes maximum

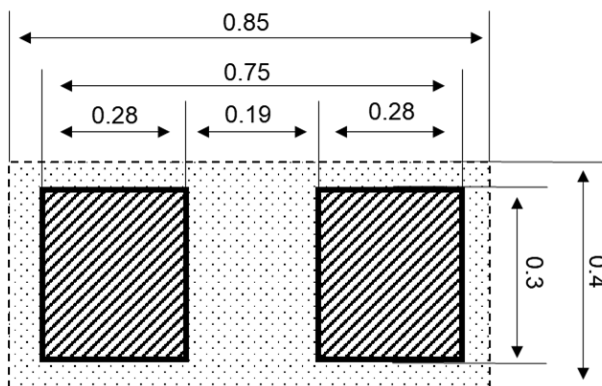


10. Package Information



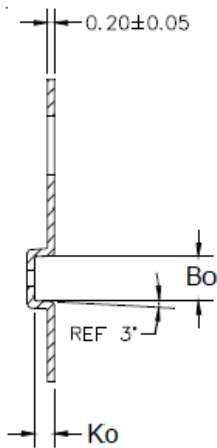
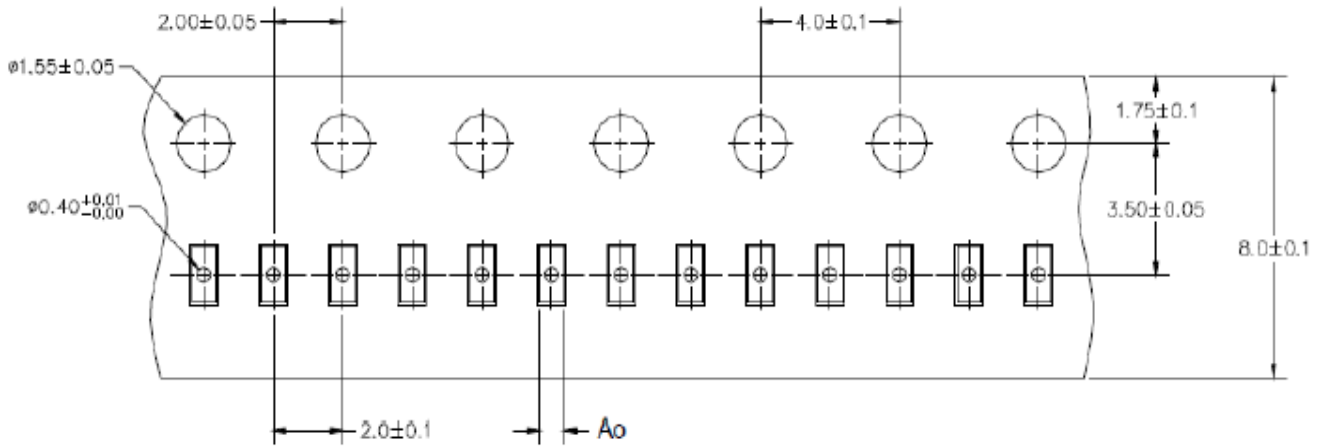
Unit:mm

11. Suggest Pad Layout

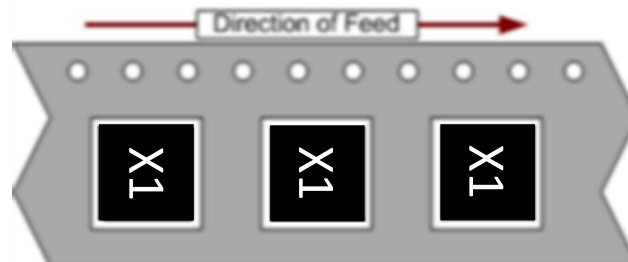


Unit:mm

12. Tape & Reel Information



A0	B0	K0
0.69 +/-0.10 mm	1.19 +/-0.10 mm	0.66 +/-0.10 mm



13. Ordering Information

Part No.	Marking	Quantity
FSD0325D	X1	10,000pcs/7" Reel

14. History

Version	Date	File No.	Recording	Basis
A	03-Jan-2019	F11910S	New Create	Market
2.0	03-Mar-2021		Update Version	System